Department of Energy

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FEB 27 2003

Mr. Gene Jablonowski, Remedial Project Manager
United States Environmental Protection Agency
Region V, SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0218-03

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Jablonowski and Mr. Schneider:

RESPONSE TO COMMENTS ON SILOS 1 AND 2 ACCELERATED WASTE RETRIEVAL PROJECT REMEDIAL DESIGN PACKAGE

References: 1. Letter, T. Schneider to J. Reising, "Comments - Silos 1 and 2 Accelerated Waste Retrieval Project Remedial Design Package, Revision 2, September 2002," dated November 5, 2002

2. Letter, G. Jablonowski to J. Reising, "Conditional Approval of Draft Final Revised Remedial Design Package for the Silos 1 and 2 Accelerated Waste Retrieval Project and Response to Comments," dated October 4, 2002

3. DOE Letter, DOE-0698-02, J. Reising to G. Jablonowski and T. Schneider, "Draft Final Revised Remedial Design Package for the Silos 1 and 2 Accelerated Waste Retrieval Project," dated September 5, 2002.

The purpose of this letter is to transmit documentation responding to the referenced comments on the Draft Final Revised Remedial Design (RD) Package for the Silos 1 and 2 Accelerated Waste Retrieval (AWR) Project (Reference 3) to the United States Environmental Protection Agency (USEPA) and Ohio Environmental Protection Agency (OEPA).

Recycled and Recyclable

The following documentation is enclosed:

1. A Response to Comments Document, providing responses to the referenced comments from the OEPA.

2. A revised Process Description Document for the AWR Project (RD Package Section 2.1), incorporating the responses to OEPA comments.

3. Drawing 94X-3900-F-1490, documenting the design change to pipe Decant Sump Tank liquid to the Transfer Tank Area (TTA) tanks rather than one of the silos.

4. Pages excerpted from procedure 11-A-003, Radon Control System (RCS) Alarm Responses, documenting RCS High-Efficiency Particulate Air (HEPA) filter pressure drop setpoints, as requested on the USEPA's conditional approval.

If there are any questions concerning the enclosed documentation, please contact Nina Akgündüz at (513) 648-3110.

Sincerely,

Johnny Reising

Johnny W. Reising
Fernald Remedial Action
Project Manager

FCP:Hall

Enclosure: As Stated

cc w/enclosure:
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Responses to 10/24/02 Ohio EPA Comments on Silos 1 and 2 Accelerated Waste Retrieval Project Draft Final Remedial Design Package Revision 2, September 2002

4749

General Comments:

1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: na Pg #: na Line #: na Code: C
Original Comment #:
Comment: The design inadequately describes measures taken to prevent spills. The silos contents will be pumped at high flows and relatively high pressure throughout the system. The headers on the TTA bridge, where silo contents and slurry water are rerouted, require additional information on spill prevention.
Response: As was discussed with the OEPA and U.S. EPA at the November 21, 2002 briefing, the design of the slurry piping system includes the use of double-contained schedule 80 carbon steel pipe in all outside areas. The contained pipe will include leak detection and alarms. If a leak in the core pipe core pipe is detected, flow will be shutoff until the source of the leak is identified and appropriately addressed.

A core pipe leak concurrent with the failure of both the leak detection and response procedures and failure of the external containment piping system is considered to be highly unlikely. If such a failure were to occur, however, the entire area under the outside slurry pipe drains towards the southeast retention basin. The volume of material released during the period required to halt flow would be contained prior to reaching the Pilot Plant Drainage Ditch.

Leaks or Spills from the TTA Tanks and Piping Systems in the TTA building will be controlled by the secondary containment and sump systems within the containment building.

Action:
1) Finalize the details of the leak detection and response system discussed with U.S. EPA and OEPA at the November 21, 2002 briefing. Review the design with U.S. EPA and OEPA through the DCN process when finalized.
2) Establish administrative controls and procedures for piping leak alarms in the Standard Operating Procedures developed for Silo waste retrieval operations.

Section 2.1 - Process Description:

2. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.3 Pg #: 2-2 Line #: na Code: C
Original Comment #:
Comment: The lack of a contingency for potential debris that may hinder and/or prohibit sluicing operations continues to be an issue for Ohio EPA. Submit a contingency plan for debris removal in the event that this debris would prohibit further sluicing operation.
Response: The slurry pump has been specified and tested to confirm a high solids handling capability. Slurries up to 60 % solids have been pumped with these pumps. The impeller and pump screen are sized to pass solids of up to 0.75 inches. If the pump inlet screen should become plugged, cold loop testing has shown that the sluicer nozzles can be used to clean the inlet screens on the pump. The design also includes provisions for backflushing the discharge piping and pump in case of pluggage. Larger debris such as plastic bags, angle irons, 2X4 wood pieces, bottles and cinderblocks have been successfully manipulated away from the slurry pump by the sluicer nozzle sprays. The intent of the current design is to operate without the use of external

4

manipulators until the bottom heel level is reached. Smaller debris will be pushed from the pump suction area by the sluicer nozzles. Larger debris will directed away from the pump inlet by sluicing away supporting material below and adjacent to the large debris, thus manipulating the debris to fall away from the pump inlet. The cold loop testing has demonstrated that the pumps and sluicing equipment specified in the current design are capable of handling any debris anticipated to be in Silos 1 and 2.

Action: As discussed at the November 21, 2002 meeting, the AWR Project is undertaking a focused review on the subjects of heel and decant sump tank sludge removal. Removal of discrete objects and debris from the silos, and contingency measures, such as manual long-reach tools, as a contingency for moving debris away from the slurry pumps, will be included in this review. U.S. EPA and OEPA will be briefed on the progress of this review in February 2003. A schedule for submittal of the plan to the U.S. EPA and OEPA will be established in the RA Work plan for waste retrieval.

3. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.4 Pg #: 2-2 Line #: na Code: C
Original Comment #:
Comment: Present additional detail or conceptual idea on how decant sump tank solids removal will be addressed. Simple deferral to D & D Safe Shutdown is inadequate.
Response: As was discussed at the November 21 briefing, removal of decant sump tank solids is being addressed by the recently formed design task team discussed in the response to Comment No. 2. An initial conceptual approach to the decant sump solids is as follows:

- All material that can be fluidized or slurried and pumped will be removed as a liquid or slurry. First pass tank decontamination will be performed at this time.
- The decant tank will be excavated and removed from its current location.
- Remaining tank material will be sampled for radioactive content and chemical properties.

Action: A status update on the heel/decant sump solids removal evaluation was provided to OEPA and U.S. EPA on February 26, 2003. The results of the activity will be incorporated into a Heel and Decant Sump Solids Removal Plan. A date for submittal of the plan to the U.S. EPA and OEPA will be established in the RA Work Plan for Waste Retrieval Operations.

4. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.5 Pg #: 2-3 Line #: Code: C
Original Comment #:
Comment: The original FSMS on Silo 4 was also to provide hands-on training for operators. How will operators acquire the training originally planned for FSMS?
Response: The cold loop testing utilizes actual components of final sluicer and pumping modules. This test loop will be either at Oak Ridge, or at the FEMP, to provide a training opportunity for operations personnel.
Action: Prepare an operator's training plan utilizing the Cold Test Loop at Oak Ridge and/or relocating the equipment to the FEMP for use in operator training.

5. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.7.2 Pg #: 2-4 Line #: na Code: C
Original Comment #:
Comment: The reconfiguration of the HEPA filters to accommodate 2000 scfm process flow does not appear to allow for a bank of filters to be isolated for maintenance. If maintenance is required will the entire AWR be shut down?

Response: As depicted on Process Flow Diagram (PFD) drawing 20 FMD010, butterfly valves are located at the inlet of each HEPA filter bank and manual butterfly dampers (added per DCN 40710-JEG-105, approved by OEPA 3/25/02) are located on the discharge side of each bank. These valves allow for isolation of a bank for maintenance without requiring shutdown of the RCS. However, each HEPA bank is only rated for 1200 CFM. If filter changes can not be scheduled during routine maintenance, some operational activities (e.g., pump module operation) would have to be stopped to allow the change-out of the filters. This would only occur during Phase 3 operation and when 2000cfm is required to support concurrent operation of Silo Waste Retrieval and the Silos 1 and 2 Remediation Facility.

Action: Appropriate limitations on Phase operational activities during HEPA filter change-out will be specified in the operations and maintenance procedures for RCS Phase 3 operation.

6. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.8 Pg #: 2-4, 5 Line #: na Code: C
Original Comment #:
Comment: Have any tests/studies been performed to verify that just dry air will rejuvenate the carbon beds.
Response: The carbon will not become spent in these operations because radon decomposes over a short half-life and is not actually retained in the bed. The radon removal effectiveness of the carbon can be reduced by the pores becoming flooded with water. However, since air fed to the RCS is dried prior to entering the carbon beds accumulation of moisture in the beds is not expected. If drying of one the of the beds is required , circulation of unheated, dry air through the beds is expected to provide the necessary drying within an acceptable period of time. The configuration of the RCS will allow the addition of additional drying capacity, if additional regeneration capacity proves to be necessary.

Action: N/A

7. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.0 Pg #: 3-1 Line #: Code: C
Original Comment #: 10
Comment: In DOE's Response to Comments, original comment No. 10, it is indicated that wording will be changed in Section 3.0 to clarify the maximum total sluice water flow. In Ohio EPA's review, the wording has not been changed.
Response: Text to clarify that the TTA slurry/decant pumps will be operated to provide a maximum **total** sluicing flow of 300 gpm was added to Section 3.1, page 3-4 of the Process Description Document. This text was inadvertently not duplicated in the Section referenced in OEPA's comment.

Action: Section 3.0 has been revised to clarify the total sluice water flow.

8. Commenting Organization: Ohio EPA Commentor: OFFO **4749**
Section #: 3.1 Pg #: 3-2 Line #: na Code: C
Original Comment #:
Comment: How will the CCTV video camera and lights be kept clean? Although this appears to be a minor component of the design, visual observation of sluicing operations is critical to the successful operation of AWR.
Response: We have referred to Battelle Pacific Northwest Laboratory for their experience. Battelle experimented with all reasonable ideas including compressed air jetted at the lens, water cleaning jets, movable film across the lens similar to that on race car cameras, etc. and found no advantage when compared to 'no action,' especially when the length of service was considered. Battelle has indicated that the cameras can be protected from direct splashing, by turning cameras away from the point of splash. Other cameras are used to view that particular operation. The camera lenses remain functional even with some splashing on the lenses.

Although extended use of the cameras could require physical cleaning of the lenses, we have not planned to develop a procedure for such cleaning. Cleaning of the camera lenses will be a maintenance action planned and implemented specifically as the need arises. The cleaning operation would likely be conducted by tenting the camera riser, pulling the camera out of the riser and spraying and wiping the affected lenses.
Action: Prepare O&M Procedure for camera lens cleaning.

9. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1 Pg #: 3-4 Line #: na Code: C
Original Comment #:
Comment: Provide additional detail, to include pictures/drawings of the Long Reach Manipulator Tool and how it will be inserted into the silos.
Response: Based on the highly successful cold loop testing results, the long arm manipulator tool has been eliminated from the system design. However, potential contingency measures, such as manual long-reach tools, are being evaluated as part of the Heel and Decant Sump Tank sludge removal evaluation, to provide a contingency for moving debris away from the slurry pumps.

Action: The Process Description Document has been revised to delete the LRMT. Any equipment identified for use through the Heel and Decant Sump Tank sludge removal evaluation will be documented for review through the DCN process.

10. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.3 Pg #: 3-5 Line #: na Code: C
Original Comment #:
Comment: The addition of a cutter ahead of the slurry pump appears to be an addition to the design, provide additional detail.
Response: Although a cutter was originally specified, it was determined through Cold Loop Testing that the use of a Hazleton pump, without a cutter or an agitator attached at the suction, was the best choice for the AWR design.

Action: The Process Description Document has been revised to delete the cutter.

11. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.5 Pg #: 3-6 Line #: na Code: C
Original Comment #:
Comment: What is the size and gauge of the slurry pipeline?
Response: The core piping is 4 diameter" Schedule 80 carbon steel pipe. The outer (containment) pipe is 6" diameter 10-gauge (0.134) carbon steel pipe.

Action: N/A

12. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.6 Pg #: 3-7 Line #: na Code: C
Original Comment #:
Comment: Provide additional information on the sluicer booster pumps. What drawings include them, and specifically how will they be used.
Response: The sluicer booster pumps were incorporated in the original conceptual design because the TTA Tank slurry/decant pumps couldn't produce the necessary pressure for the sluicer nozzles. Through close interaction with the decant pump manufacturer during Cold Loop Testing, combined with design refinements, the design team was able to eliminate the need for the sluicer booster pumps and achieve the needed flows and pressures from the slurry/decant pumps alone.

Action: The Process Description Document has been revised to delete the booster pumps.

13. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.7 Pg #: 3-7 Line #: na Code: C
Original Comment #:
Comment: Per August 26, 2002, AWR comment resolution meeting, the Silo Decant Sump Tank is to be pumped to the TTA. This is addressed in the response to comments but not in the design.

Response: As committed to in the 9/4/02 Response to Comments document, the design details of piping the liquid pumped from the Decant Sump directly to the TTA (rather than into one of the Silos) are being developed through the Design Change Notice process. Although not yet completed, this DCN will include a 40 gpm sump pump in the decant sump tank, with sufficient head to pump the liquid at the required rate into the TTA tank header pipe. In addition, the 7" per hour criterion specified in the RD Package for initiating pumpout of the decant sump tank liquid is being revised to a rate of change of 500 gallons per hour. This is the equivalent of 7" at the midpoint of the horizontal decant tank, and provides a more appropriate setpoint.

Action: 1) The Process description been revised to reflect pumping decant liquid to the TTA tanks.
2) The Process Control Summary will be revised to reflect 500 gallons per hour as the new rate of change setpoint.
3) Drawing 94X-3900-F-01490, Rev. 2 is enclosed documenting the design change.

14. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.1.8 Pg #: 3-8 Line #: na Code: C
Original Comment #:
Comment: Provide additional detail on the Long Reach Manipulator Arm.
Response: Based upon cold loop testing results, the long arm manipulator tool has been eliminated from the system design.
Action: The Process Description Document has been revised to delete the LRMT. Any equipment identified for use through the Heel and Decant Sump Tank sludge removal evaluation will be documented for review through the DCN process.

15. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.3.1 Pg #: 3-11 Line #: na Code: C
Original Comment #:
Comment: The pressure relief valves on the TTA need to be monitored in a similar fashion as the pressure relief valves on the silos.
Response: The pressure control valves (PCVs) on the TTA Tanks will be monitored in the same manner as the PCVs on Silos 1 and 2.

Action: The referenced text has been revised to reflect the monitoring of the TTA PCVs.

16. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.6.1 Pg #: 3-21 Line #: na Code: C
Original Comment #:
Comment: The design requirement listed in this section for Phase 1 need to be reflected in the RCS RAWP for Phase 1.
Response: As has been discussed with the OEPA during recent conversations, the schedule and criteria for continuous operation of the RCS during non-construction periods of Phase 1 will be finalized based upon the operational experience and data collected during the Hot SOT.
Action: Once the criteria are finalized, they will be incorporated into the design basis and appropriate Remedial Design and Remedial Action documentation. These criteria will be reviewed with the OEPA and U.S. EPA as part of the process to reach agreement upon the schedule for initiation of continuous operation. DOE has committed to providing a date for initiation of continuous operation to the OEPA by March 15, 2003.

17. Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 3.6.4 Carbon Beds Pg.# 3-23 Code C
Original Comment #
Comment: The text indicates that radon has an affinity to activated carbon, and that it has a short half-life. The daughter products of radon include isotopes of polonium, lead and bismuth. Do each of these materials also have an affinity towards activated carbon? Will they stay attached to the carbon?
Response: Since the daughter products of radon are alpha particle producers and do not have an affinity for carbon, these particles will escape the carbon bed. Since daughter products are solid materials, any products escaping into the air stream will be captured by the downstream HEPA filters. The concentration of solid daughters exiting the air filters will be minimal. The generation of daughter products from decay of radon which remains filtration is addressed in the RCS performance calculations. See Section 5.2 RCS Performance Calculations page 24.

Action: N/A

Section 4 - Berm Excavation Plan:

18. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 2.1 Pg #: 5 Line #: na Code: C
Original Comment #: 27
Comment: Neither drawing referenced in this section is included in section 4.
Response: Comment acknowledged.
Action: Drawings 94X-3900-G-01932(G6003) and 94X-3900-G-01933(G6004) have been added.
Comment: These drawings have been added and the following has been noted:
Drawing 94X-3900-G-01932(G6003), note 3 states:
"Remove existing K-65 trench as necessary to install foundations. Dispose of trench as specified by construction manager."
The existing trench and drain system must be maintained to control drainage from the silos, as indicated in section 2.1. Controlled drainage from the silos to the K-65 concrete sump must be maintained. Removal of any part of this system is not acceptable.
Response: The referenced note on the drawing refers to the removal of a section of the Silo perimeter trench to allow the installation of the foundation for Pipe Rack Bent 8/8A. As indicated in DCN-40710-JEG-015, submitted to OEPA 12/12/01 and approved 1/3/02, "Approximately 20 feet of the perimeter drainage trench immediately north of the K-65 pipe trench will be removed to allow excavation and installation of the foundation. During installation of the foundation, runoff will be diverted into the perimeter trench north of the excavation. After installation of the foundation and backfilling is completed, the area will be contoured to provide drainage to the perimeter trench."
Action: The foundation for Pipe Rack bent 8/8A was installed as outlined in DCN-40710-JEG-015. Controlled drainage from the Silos and silo berms into the perimeter trench, and subsequently to the Waste Pit Area Runoff Control Sump has been maintained.

Appendix A - Process Flow Diagrams:

19. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: DWG 20FMD001 Pg #: na Line #: na Code: C
Original Comment #:
Comment: Column 17 of the mass balance table indicates 'condensate to tanker truck'. The design states that condensate will be pumped to the condensate hold-up tank. Make appropriate changes to DWG.
Response: Condensate from the RCS is collected in one of two 3000-gallon Condensate Receipt Tanks. When one of these tanks is full the flow is switched to the other tank, and the full tank is sampled and pumped to a tanker truck for transfer to the AWWT. As depicted on Process Flow Diagram (PFD) 20FMD008, Column 17 on the mass balance represents the discharge from the RCS facility to the tanker truck.
Action: N/A

20. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: DWG 20FMD001 Pg #: na Line #: na Code: C
Original Comment #:
Comment: The radon concentration from Silo 1 and Silo 2 appear to be low by a factor of 10.
Response: The input radon concentration reflected on the referenced mass balance table represents the steady state concentration of radon in the headspace during operation of the RCS – which is expected to be substantially lower than the current headspace concentration.. The calculation of these steady state values is documented on pages 12 and 13 of the RCS performance calculation provided in Section 5.2 of the Remedial Design Package. The actual headspace concentrations achieved during the recent Hot SOT run were significantly lower than the estimated steady state concentrations reflected on the referenced table.
Action: N/A

21. Commenting Organization: OEPA Commentor: GeoTrans, Inc
Section #: App. A Sheet #: F6003, Material Balance Table Code: C
Original Comment #
Comment: The densities of the solids are not consistent in the table. The density of the solids for streams numbered 1, 3, 15 and 21 is calculated to be 174.2 pounds per cubic foot ('Solids Transfer, lb/min' divided by ('Flow, gpm' minus 'Water (Only) Transfer, gpm'). For stream number 6, the density is calculated to be 513.5 pounds per cubic foot. For streams numbered 11, 12 and 13, the density is calculated as 127.7 pounds per cubic foot. Because this is the same solid material, the density should remain constant.
Response: The densities in the table are based on a solids particle density of 2.77 grams/cc and a water density of 1.00 gram/cc. Given a percent solids content such as 70%, the wet bulk density is calculated: 1 / ((0.700 / 2.77) + (1- 0.700) / 1) = 1.81 grams/cc. The in-place solids are calculated as (1.81 x 3785 grams/gal x 7.4805 gal/CF) / 453.6 grams/# = 112.9 #/CF. The densities of the remaining flow streams are shown below.

Densities of Liquid Flow Streams								
Flow Stream	1	3	6	11	12	13	15	21
Solids %	15	15	70	2.75	2.75	2.75	50	15
Solid gm/cc	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77
Water gm/cc	1	1	1	1	1	1	1	1
Liquid Bulk Density	1.107	1.107	1.818	1.018	1.018	1.018	1.474	1.107
Density lb/ft3	69.01	69.01	113.4	63.51	63.51	63.51	91.69	69.01

As stated in the notes on the drawing, "Only flowrates are indicated as average and maximum values, all others values indicated are the result of calculations based on the flowrate."
Action: N/A

11

Instrument: PDIT-FLT-20-002A **Priority 2 Alarm**

Warning: High DP Alarm 4749

Description: High differential pressure across RCS Exhaust Filter 2A

Setpoint: +4.0"

PLC Automatic Response: None

Immediate Response:

1. Notify the Shift Supervisor
2. Check local DP gages PDIT-FLT-20-002A/A and PDIT-FLT-20-002A/B to determine which filter is causing the alarm.
3. Document readings in the Control Room Log Book.
4. If standby filter FLT-20-002B is operational, switch operation to the standby.
5. Monitor system as standby filter comes on line.
6. Isolate filter FLT-20-002A by CLOSING LVR-20-024 and CLOSING manual valve DMP-20-014.

Follow-up Actions:

1. Maintenance should inspect the DP instrument.
2. If DP instrument is working properly, maintenance will have to change one or more of the filter banks.
3. Perform other actions as specified by the Shift Supervisor to determine cause and correct problem.

Possible Causes for Alarm:

1. Plugged or wet Pre-HEPA Filter
2. Plugged or wet HEPA Filter.
3. DP sensors improperly reading filter DP.
4. Sudden change in air moving through filter (for example, during Startup or Shutdown).

Instrument: PDIT-FLT-20-002A **Priority 2 Alarm**

4749

Warning: Low DP Alarm

Description: Low differential pressure across the RCS Exhaust Filter 2A

Setpoint: +0.1" H2O

PLC *Automatic* Response: None

Immediate Response:

1. Notify the Shift Supervisor
2. Check local DP gages PDIT-FLT-20-002A/A and PDIT-FLT-20-002A/B to determine which filter is causing the alarm.
3. Document readings in the Control Room Log Book.
4. If standby filter FLT-20-002B is operational, switch operation to the standby.
5. Monitor system as standby filter comes on line.
6. Isolate filter FLT-20-002A by CLOSING LVR-20-024 and CLOSING manual valve DMP-20-014.

Follow-up Actions:

1. Maintenance should inspect the DP instrument.
2. If DP instrument is working properly, maintenance will have to change one or more of the filter banks.
3. Perform other actions as specified by the Shift Supervisor to determine cause and correct problem.

Possible Causes for Alarm:

1. Hole in Filter Fabric of Filter Seal.
2. DP sensors improperly reading filter DP.
3. Sudden change in air moving through filter (for example, during startup or shutdown).

Instrument: PDIT-FLT-20-002B **Priority 2 Alarm**

4749

Warning: High DP Alarm

Description: High differential pressure across RCS Exhaust Filter 2B

Setpoint: +4.0"

PLC Automatic Response: None

Immediate Response:

1. Notify the Shift Supervisor
2. Check local DP gages PDIT-FLT-20-002B/A and PDIT-FLT-20-002B/B to determine which filter is causing the alarm.
3. Document readings in the Control Room Log Book.
4. If standby filter FLT-20-002A is operational, switch operation to the standby.
5. Monitor system as standby filter comes on line.
6. Isolate filter FLT-20-002B by CLOSING LVR-20-025 and CLOSING manual valve DMP-20-018.

Follow-up Actions:

1. Maintenance should inspect the DP instrument.
2. If DP instrument is working properly, maintenance will have to change one or more of the filter banks.
3. Perform other actions as specified by the Shift Supervisor to determine cause and correct problem.

Possible Causes for Alarm:

1. Plugged or wet Pre-HEPA Filter
2. Plugged or wet HEPA Filter.
3. DP sensors improperly reading filter DP.
4. Sudden change in air moving through filter (for example, during startup or shutdown).

Instrument: PDIT-FLT-20-002B **Priority 2 Alarm**

4749

Warning: Low DP Alarm

Description: Low differential pressure across the RCS Exhaust Filter 2B

Setpoint: +0.1" H2O

PLC Automatic Response: None

Immediate Response:

1. Notify the Shift Supervisor
2. Check local DP gages PDIT-FLT-20-002B/A and PDIT-FLT-20-002B/B to determine which filter is causing the alarm.
3. Document readings in the Control Room Log Book.
4. If standby filter FLT-20-002A is operational, switch operation to the standby.
5. Monitor system as standby filter comes on line.
6. Isolate filter FLT-20-002B by CLOSING LVR-20-025 and CLOSING manual valve DMP-20-018.

Follow-up Actions:

1. Maintenance should inspect the DP instrument.
2. If DP instrument is working properly, maintenance will have to change one or more of the filter banks.
3. Perform other actions as specified by the Shift Supervisor to determine cause and correct problem.

Possible Causes for Alarm:

1. Hole in Filter Fabric of Filter Seal.
2. DP sensors improperly reading filter DP.
3. Sudden change in air moving through filter (for example, during startup or shutdown).